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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/467,210	12/20/1999	DAE-HEON KWON	678-405	2053

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EXAMINER

TRAN, HAI V

ART UNIT	PAPER NUMBER
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2611

9

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/467,210

Applicant(s)

KWON ET AL.

Examiner

Hai Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Z.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The terminal disclaimer filed on 10/02/2003 disclaiming the terminal portion of any patent granted on this has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Arguments

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis (US 6243596) in view of Tsukamoto et al. (US 5005013) and further in view of Lagoni et al. (US 6141058) and further in view of Hoffman et al. (US 4427847) and further in view of Benedetto et al. (US 4591661).

Regarding claim 1, Kikinis discloses a cellular phone in which a TV tuner and receiver is installed in battery pack adapter 100 to allow user to receive and view television (see Fig. 9-12; Col. 17, lines 34-41).

Kikinis does not clearly disclose in detail “a TV module for receiving and demodulating a desired TV channel signal among radio-frequency electromagnetic signals received in response to an input of a tuning signal, when the TV module operates by supply of a power supply voltage, to generate a composite video signal, a composite synchronizing signal and a composite audio signal”; “a TV control section for supplying the tuning signal corresponding to a channel selection command signal to the TV module, synchronizing On Screen Display (OSD) data corresponding to display control data and display data with the composite synchronizing signal to output the synchronized signal as a video signal” and “A display unit for synchronizing the composite video signal from the TV module and the video signal from the TV control section with the composite synchronizing signal and displaying the synchronized composite video signal and the video signal on an image viewing screen”; However, Kikinis discloses a TV tuner and receiver is installed in battery pack 1 adapter 100 to allow the user to receive and view television (Col. 17, lines 34-41) on a display unit LCD 202.

Tsukamoto shows a hand-held device with a TV module for receiving and demodulating a desired TV channel signal among radio-frequency electromagnetic signals received (antenna 2 receives a TV broadcast radio wave and a radio wave generated from a Radio transmission station of telephone office; Col. 3, lines 36-41)

in response to an input of a tuning signal, when the TV module operates by supply of a power supply voltage (Col. 4, lines 4-10), to generate a composite video signal, a composite synchronizing signal and a composite audio signal (Col. 4, lines 10-21) and a TV control section for supplying the tuning signal corresponding to a channel selection command signal to the TV module, synchronizing On Screen Display (Timing Control Circuit 35) data corresponding to display control data and display data with the composite synchronizing signal to output the synchronized signal as a video signal (Fig. 2 & 14; Col. 4, lines 4-64; Col. 10, lines 4-40 and Col. 13, lines 25-62). A display unit 3 (Fig. 2 and 14) for synchronizing the composite video signal from the TV module and the video signal from the TV control section with the composite synchronizing signal and displaying the synchronized composite video signal and the video signal on an image viewing screen (Col. 14, lines 25-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis' s Video driver 402 with the LCD's video circuitry driver, as taught by Tsukamoto, so to take the advantage of the well known design of the LCD video circuitry driver to drive the LCD to display the received video signal.

Moreover, Kikinis 's Cellular phone (MRFU) performs a two-way conversation in which CPU 401 (MSP) continuously processes both incoming and outgoing audio data. The incoming voice signal is received through a forward channel, demodulated and outputted to the audio speaker and the outgoing voice signal (reply back) is modulated from the microphone 203 and transmitted out on the reverse channel.

Therefore, Kikinis 's Cellular phone (MRFU) encompasses the claimed limitation "a Mobile Station Radio Frequency Unit (MRFU) for demodulating a signal indicative of an incoming call received through a forward channel, forming an audio conversion channel among the received radio-frequency electromagnetic signals to output the demodulated signal, and modulating and transmitting a signal in a reverse channel"

Kikinis further discloses CPU 401 (A Mobile Station Processor) for establishing a phone mode for conversation or TV mode for displaying the received TV signal from the TV tuner on an image viewing screen (LCD 202) in response to an user selection.

Kikinis does not disclose, "demodulating a signal indicative of an incoming call".

Lagoni discloses a television/telephone system (Fig. 1) wherein the telephone network interface 126 detects and demodulates a signal indicative of an incoming call received through a pair of conductors Tip (T) and Ring (R) (Col. 4, lines 4-7 and lines 14-17); Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis' s cellular phone system to detect the incoming telephone signal and display an alert message, i.e. Calling ID, as taught by Lagoni, so to notify the user of an incoming call while watching the TV and also to give the user a choice to answer or not to answer the incoming call based on the displayed Caller Id while watching a TV program (Col. 1, lines 17-23).

As to limitation "A Mobile Station Processor (MSP) for establishing a phone or TV mode in respond to an Input command, generating the channel selection

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command signal stored in a predetermined memory area by setting the TV mode, interrupting a power supply voltage supplied to the TV module and switching from TV mode to the phone mode according to a preset incoming call alarm mode when receiving an incoming signal from the MRFU, and processing audio data outputted from the MRFU to output the processed audio data signal while supplying audio data to the MRFU”, Lagoni further discloses a controller 110 (MSP) for establishing TV mode in response to an input command from the RC 125, generating the channel-related data (channel selection command signal) stored in a predetermined RAM (memory area) (Col. 3, lines 1-3) by setting the switched ON of the Television receiver (TV mode) (Col. 4, lines 25-28), Controller 110 supplies the display control data via control line 141 to the OSD processor 140 (Col. 3, lines 61-65+) according to a Priority List Caller ID (preset incoming call alarm mode) when receiving an incoming signal from the telephone network interface 126 (MRFU) (Col. 4, lines 18-32), and answering the call (processing audio data outputted from the MRFU to output the processed audio data signal while supplying audio data to the MRFU) by switching from TV mode to Phone mode;

Kikinis in view of Tsukamoto and Lagoni does not clearly disclose “interrupting a power supply voltage supplied to the TV module and switching from TV mode to the phone mode”.

Hoffman discloses upon receiving an alarm signal regarding an incoming call during TV mode, the user activates the Phone mode 32 on the RC 15A for switching from TV mode to Phone mode and switching TV audio function to Phone audio

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function (Col. 7, lines 59-Col. 8, lines 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis in view of Tsukamoto and Lagoni to switch TV mode to TP mode, as taught by Hoffman, so to alarm the user that a phone call is received and to provide to user an alternative to pick-up the phone and perform a phone conversation through the TV device while the TV program is still on if desired.

Kikinis in view of Tsukamoto, Lagoni and Hoffman fails to disclose while switching from TV mode to the phone mode, the TV/phone interrupts a power supply voltage supplied to the TV module.

Benedetto discloses a portable cordless telephone transceiver-radio receiver that performs on two modes, such as radiobroadcast receiver mode and/or a telephone mode , wherein when the portable cordless telephone transceiver-radio receiver is set to a "telephone standby" mode, and when an incoming ring signal is detected while receiving "radio" signal via circuit 78, switching switch 54 to #2 position (from "radio" mode to phone conversation mode). Thus removing power from radio receiver circuit 78 (Col. 5, lines 10-28 and Col. 6, lines 4-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis in view of Tsukamoto and Lagoni with the teaching of removing/interrupting power to the TV module while switching from TV mode to Phone mode so to do not distract user while talking on the phone and in the mean time to save power consumption of the battery.

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Regarding claim 2, in view of the discussion in claim 1, neither Kikinis nor Lagoni clearly disclose a power switch disposed between the TV module and a power supply unit, the power switch being switched under the control of the MSP (Mobile Station Processor) to turn ON/OFF the TV module.

Tsukamoto further discloses a power switch (switch 6 'TV OFF mode', Fig. 1) disposed between the TV module and the AC power supply (not show), the power switch being switched under the control of the CPU 23 (MSP) to turn ON/OFF the display 3 (Fig. 9, steps B1, B2, B3, **B4** for TV OFF mode, B7 and **B8** for ON; Col. 9, lines 59-Col. 10, lines 3 and Col. 12, lines 54-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to supply a power switch, as taught by Tsukamoto, so the Kikinis' s TV-Phone is able to display message of the incoming call while the system is under power saving mode, i.e., standby/sleep mode of powering off the display and the TV mode is OFF but not the main unit.

Regarding claim 3, in view of the discussion in claim 1, neither Kikinis nor Lagoni clearly disclose the a Radio Frequency Switch (RFSW) allowing an antenna to be connected to both the TV module and the Mobile Station RF unit (MRFU) in response to establishment of the TV mode of the Mobile Station processor (MSP) and allowing the antenna to be connected to only the MRFU in response to the establishment of the phone mode of the MSP.

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Tsukamoto discloses an antenna 2 receives a TV broadcast Radio wave and a radio wave generated from a radio transmission station of a telephone service (Fig. 1; Col. 3, lines 12-39; Fig. 9 shows an algorithm of how the switch 6 function, i.e., switch 6 on VHF/UHF position, works with CPU 23) in response to the establishment of the TV mode of the CPU 23 (MSP), and allowing the antenna 2 to be connected to only the Pager mode (MRFU) in response to the establishment of the Pager mode only (switch 6 on OFF position) of the CPU 23 (MSP). Thus, Tsukamoto' switch 6 is a RFSW.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis' TV-phone with an RF switch/RFSW connects an antenna to the TV module and the Mobile Station RF unit (MRFU), as taught by Tsukamoto, so that the TV-phone receives both signals simultaneously, TV and phone, and allows user to view TV while the phone receiver works in the background to alert the viewer of an incoming call (Col. 13, lines 7-10).

Regarding claim 4, in view of the discussion in claim 1, Lagoni further discloses wherein the TV mode allowing for viewing of a TV image (if TV receiver is switched ON, i.e., active and able to display a picture; Col. 4, lines 27-28), an incoming call alarm mode of the TV phone upon reception of an incoming call (displays Caller ID; Col. 4, lines 23-31) further comprises displaying an incoming call character message at a specific region of a TV image-viewing screen (Fig. 4).

Regarding claim 5, in view of the discussion in claim 1, Lagoni further discloses wherein the TV mode allowing for viewing of a TV image (if TV receiver is switched ON, i.e., active and able to display a picture; Col. 4, lines 27-28), an incoming call alarm mode of the TV phone upon reception of an incoming call (displays Caller ID; Col. 4, lines 23-31).

Kikinis in view of Tsukamoto and Lagoni does not clearly disclose upon reception of an incoming call further comprises switching off and on, at a predetermined interval, only the audio signal outputted from the TV module.

Hoffman discloses upon reception of an incoming call comprises switching off and on, at a predetermined interval, only the audio signal outputted from the TV module (audible alarm signal of telephone ring; Col. 5, lines 10-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kikinis in view of Tsukamoto and Lagoni that upon reception of an incoming call comprises switching off and on of an audible sound outputted from the TV module, as taught by Hoffman, so to alert the viewer of an incoming call with an audible sound (Col. 5, lines 22-26).

Regarding claim 6, in view of the discussion in claim 1, Lagoni further discloses wherein the TV mode allowing for viewing of a TV image (if TV receiver is switched ON, i.e., active and able to display a picture; Col. 4, lines 27-28), an incoming call alarm mode of the TV phone in the control circuit 64 (MSP) upon reception of an incoming call further comprises displaying an incoming call character

message (displays Caller ID; Col. 4, lines 23-31) at a specific region of a TV image-viewing screen (Fig. 4).

Regarding claim 7, in view of the discussion in claim 1, Hoffman further discloses the audio outputting switch (Fig. 1, elements 62, 72) is controlled by the control circuit 64 (MSP) upon reception of an incoming call to perform two-way conversation (Col. 5, lines 38-46) based on the preset incoming call alarm mode (the TV mode is ON; Col. 1, lines 55-64) by switching TV audio function to Phone audio function so the conversation could perform while in TV mode (Col. 7, lines 59-Col. 8, lines 5).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

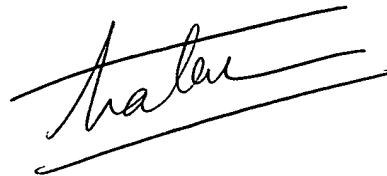
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Tran whose telephone number is 703-308-7372.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT:ht
04/30/2004

A handwritten signature, likely of Hai Tran, is written over two horizontal lines. The signature is cursive and stylized.